ABSTRACT

Title:	The effect of histamine on exocytosis in bovine chondrocytes
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Objectives

1. To investigate the role of histamine on chondrocyte secretion
2. To identify the histamine receptors on bovine chondrocytes
3. The study effect of the absence or presence of intracellular ATP on exocytosis

Methods

Bovine chondrocytes were sourced from the local slaughter house. Cartilage shavings were obtained from these and digested. Chondrocytes were maintained in Dulbecco's Modified Eagle's Medium (DMEM) with Ham's F12 additive, ascorbic acid and L-Glutamine. The isolated cells were then used for patch clamp studies. Capacitance of cell membrane was recorded. An increase in capacitance indicates a net increase in cell surface area and therefore a net exocytosis. The effect of histamine on cellular capacitance was recorded.

Results

Cell membrane capacitance was found to increase in the presence of histamine. H_1 and H_2 receptors are found to be present in bovine chondrocytes. Exocytosis though was possible only in the presence of ATP in the intracellular fluid.

Key-words: patch clamp, capacitance, exocytosis, histamine